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AUTHOR Rosenau, Norah
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ABSTRACT

The paper identified some of the major elements of political learning and suggests some of the conceptual links among these. The basic assumption of this paper is that the several existing approaches to learning and development can account for a significant portion of political learning. A selective picture of concepts and empirical knowledge about the four processes that jointly and simultaneously account for learning in the natural situations in which human individuals grow and develop are presented: 1) classical conditioning; 2) reinforcement; 3) modeling; and 4) cognitive assimilation and accommodation. The four processes are explained separately and linked to the aspects of political learning each serves to explain, while trying to keep salient the fundamental premise of the conception that the four processes are not separate but completely intertwined. Finally, the paper offers the concept of progressive differentiation as a fruitful way of viewing the process of political development, that is, political learning across the life-span. (Author)

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POLITICAL LEARNING IN CHILDREN AND ADULTS

Norah Rosenau
Mershon Center
Ohio State University

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POLITICAL LEARNING IN CHILDREN AND ADULTS

The question of how people learn about politics is not new. Until now, it has been addressed mostly by political scientists who see an answer to the question as an essential part of a general theory of political functioning. The question has not received much attention from psychologists, but a number of the treatments of political learning within the political science literature apply concepts and findings from one or another psychological theory of learning and development. Although many of these applications have been valid and useful, they have tended to be rather limited, both in the political phenomena to which they are applicable and in the concepts and data about learning from which they are drawn. In fact, there is not as yet a single unified conception in psychology which can account for all the aspects of behavior and development that are believed to be attributable to learning. Instead there are several formulations that vary in scope, specificity, and extent of empirical validation, each of which deals with one portion of the total amount of learning that needs to be explained.

One assumption that underlies this paper is that, <u>taken together</u>, the several existing approaches to learning and development can account for a significant portion of political learning. In order to develop such an account, it is necessary first to make clear the types of acquisitions that we are including in our use of the concept of political learning. This will be the first problem addressed in this paper and it will be

clear that our usage is much more encompassing than the one that generally has guided political socialization research.

The major task of the paper is then to present a selective picture of concepts and empirical knowledge about the four processes that we see as jointly and simultaneously accounting for learning in the natural situations in which human individuals grow and develop. These four processes are (1) classical conditioning, (2) reinforcement, (3) modeling, or observational learning, and (4) cognitive assimilation and accommodation. We will explicate the four processes separately and link each of them to the aspects of political learning it serves to explain, while trying to keep salient the fundamental premise of our conception that the four processes are not separate but complexly intertwined.

Finally, the paper offers the concept of progressive differentiation as a fruitful way of viewing the process of political development, that is, political learning across the life-span. Although not a formal theory in any respect, we consider that a framework structured around the concept of progressive differentiation provides a promising means of dealing with the relationship between political learning at one point in time and some observable aspect of political behavior or functioning at a later point.

THE SCOPE OF POLITICAL LEARNING

We do not present an explicit formulation of the outcomes that we see our view of political learning and development as explaining,

but it will be evident that our conception is broad and encompassing. Generally, we consider that a theory of political learning should aspire to account for every aspect of how an individual relates to politics.

A number of formal definitions of politics are available, and we will not attempt to present a new one or to make a choice among existing ones. However politics is defined, the process referred to includes a wide range of phenomena that generally fall into two major categories, interpersonal relationships and social organization. That is, it encompasses a variety of behaviors, interactions, and social processes, such as, among many others, leadership, influence, conflict and conflict resolution, cooperation, and roles. These phenomena are in turn partly shaped by the attitudes, beliefs, and values of the participants, by their intellectual and behavioral skills, and by norms and expectations. Political phenomena occur not only in relation to government and formal institutions, but also to varying extents in all social systems where people must share a common pool of scarce resources.

For us, therefore, phenomena such as leadership, authority, and influence are political wherever they occur, in families, classrooms, peer groups, or business organizations. It follows that the individual is encountering political phenomena virtually constantly at any age, and that the phenomena related to government and institutions are only a small and specialized aspect of the total political experience of any individual. We attempt here to develop

a conception of political learning that is applicable to learning about politics in any setting and in it broadest as well as its most specific and elaborated forms.

We consider learning to be the outcome of the interaction between two events, an environmental event and the individual's response to that event. Political learning is the outcome of the interaction between a political event and the individual's response to that event. By response we mean both overt and easily observable behavior and more covert or internal responses such as perception, cognition, emotion, etc. We consider further that the interaction between the environment and the individual which produces learning is determined by two broad sets of factors, those internal to the individual and those external to him. Among internal factors we include the individual's total physical and psychological makeup as it affects his responses to events--developmental maturity, physical size, physical skills, other constitutional givens, personality, needs and motivations, intellectual endowment, emotional temperament, and prior learning. By factors external to the individual we refer to three general sets of factors: (1) group factors, such as sex, race, ethnic membership, family structure, and socioeconomic status; (2) socio-cultural factors, such as the structure of the social system in which the event occurs (family, classroom, playground, business office, etc.), status, norms and expectations; and (3) aspects of the immediate situation, such as the physical setting, the time of day, the number of people present, and the specific content of the environmental event. Internal and

external factors jointly determine the interaction between the environmental event and the individual's response to it—and thus the individual's learning—because they determine the meaning of the environmental event and the range of responses available to the individual.

Each learning product becomes a factor internal to the individual and may even affect an external factor, such as the individual's status in the social system in which learning occurs. Therefore, each learning acquisition becomes part of the process that shapes subsequent learning. Political learning thus builds on itself in a complex manner to produce, at any point in time, the individual's particular configuration of modes of relating to political events, through which he continues to engage in political learning and to further refine his political functioning.

FOUR COMPONENTS OF POLITICAL LEARNING

We have said that an adequate formulation of political learning should account for all aspects of how an individual relates to politics. This clearly means neither attitudes and beliefs only nor overt behavior only. We are concerned, rather, with accounting for the development of several levels of functioning which, very broadly, include a range of cognitive, affective, and behavioral patterns. In order to account for all of these, it seems necessary to consider the four processes noted above that constitute partly independent and partly interrelated components of political learning, conditioning, reinforcement, observational learning, or modeling, and cognitive

assimilation and accommodation. Each of these labels refers to a body of research and theory about learning. While there is not at present a general model into which they can all be integrated elegantly, we believe nonetheless that a full account of a realm of learning as complex as learning about politics cannot be made unless the contributions of all four processes are considered.

An actual learning event almost inevitably involves more than one of these processes, but they are responsive to a somewhat different set of factors, they exhibit different regularities, and they account for different dimensions of learning outcomes. It is thus useful to examine them separately before they are put together as interactive sources in a full account of political learning.

Classical Conditioning

The classical conditioning situation, represented by the dog who learns to salivate to the sound of the bell alone after the bell has been repeatedly paired with the presentation of food, might seem far removed from any learning that is relevant to politics. Yet the learning of affect, of the evaluative component attached to attitudes, beliefs, and other orientations, does to a large extent seem to occur through a conditioning process. Generally, for example, events, behaviors, and observations that occur in a rewarding situation acquire positive value for the individual and those that occur in a punitive or otherwise noxious situation acquire negative value.

Although this type of learning seems exceedingly simple, its products may be enduring and strongly resistant to change. At any age,

conditioning is a reflexive associative process that occurs "automatically," frequently or usually without awareness. This is true for adults, when unverbalized emotional connections and associations get established that can color perceptions, attitudes, and behavior toward people or situations. Sometimes circumstances lead one to trace these associations back to their source and they can be brought under partial control or even altered. But anyone for whom such an experience is familiar knows that it is not easy, that often the emotional-evaluative association remains but one makes a deliberate effort to discount it or to take it into account in some way in one's choices and actions. Children, especially young children, do not have the capacity to examine their emotional reactions intellectually and thus the emotional associations that they develop tend to persist, to be reinforced by new situations and events that are similarly experienced because of the existing emotional responses, and to generalize to still other situations and events. In addition, as will be elaborated below, children's experiences and learning tends to be more global and undifferentiated than that of an adult. Compared to adults, children have more experiences that are novel and toward which they have no previously acquired responses or predispositions. Thus, many of their experiences serve to define whole categories of people or events for them, and it is only gradually through much continued experience that these definitions get refined, specified, and differentiated to apply to all the variations that a category can encompass. But because they come first, the experiences of childhood

occupy a privileged position in relation to later experiences in that the responses to which they give rise themselves affect how later events are experienced and thus what is learned from later events.

Early learning has a determining influence whatever the process by which it occurs, but its consequences would seem to be particularly enduring in the case of the learning of affect and values through the processes of conditioning. If it is reasonable to posit that there is a direct relationship between the ease with which an experience can be verbalized and the degree to which it can be altered or controlled, then the values and affects learned in childhood would seem to be among the most resistant to change of all learning products. As will become clearer when we present our formulation of the life-span developmental process, this is not to say that the affects and values acquired in childhood persist unchanged into later life nor that radical changes never occur. It is simply to offer the hypothesis that these forms of learning in childhood tend by their very nature to not change easily and to exercise a shaping and channeling role on other learning.

What are some individual political phenomena whose acquisition it is reasonable to explain, at least in part, in terms of classical conditioning processes? Positive attitudes toward one's family, other groups one belongs to, and ultimately one's nation would seem to be acquired to a large extent by such simple processes of association, because these groups and settings recurrently consitute the contexts for the satisfaction of the individual's basic physical and emotional needs. The well-documented finding in political socialization research

that even very young children express positive feelings toward their country and toward its symbols, and that these feelings seem to persist into adulthood with relatively unchanged intensity despite the simultaneous existence of more specific negative views, thus fits easily into our analysis of the role or conditioning processes. Similarly, feelings toward salient political institutions and roles develop at least in part through simple processes of association. Thus, for example, children have been found to have strongly positive feelings toward the President long before they have any meaningful concept of what the President is or does. In a like manner, children early acquire feelings towards the policeman because he is consistently associated with adult verbalizations of his importance, power, strength, or other attributes which are positive for the young child. By a similar associative process, of course, the ghetto child can early acquire negative feelings of hostility and mistrust toward the policeman, even before these feelings are reinforced by the perception that the policeman is a source of deprivation and punishment for people in his world.

It should again be emphasized that neither classical conditioning nor any of the separate processes of learning outlined here occurs separately. Learning occurs in situations, where the individual is bombarded by innumerable and diverse stimuli and in response to which he learns in a variety of ways simultaneously. Thus all situations contain the possibilities for learning by classical conditioning to occur, but this in itself says nothing about the importance of the

conditioned learning products relative to all the others attributable to other processes, either generally or in specific instances. Nor is any of this to say that classical conditioning plays a major role in the total process of political learning. It is only one of the elements that needs to be considered in a comprehensive account.

Reinforcement

Another seemingly simple process that explains much of human learning is instrumental conditioning, or learning through reinforcement. Basically what is involved here is that a response that is followed by positive consequences is thereby more likely to recur and a response that is followed by negative consequences is thereby less likely to occur again. In classical conditioning, learning occurs through sheer association—a response that is linked without learning to one stimulus (the unconditioned stimulus) becomes associated with a second stimulus (the conditioned stimulus) as a result of the repeated pairing of the two stimuli. In instrumental conditioning, learning occurs through reinforcement—the individual learns to make a certain response to a certain stimulus because the response is followed by reinforcement when made in the presence of that stimulus. Although psychologists differ about whether reinforcement strengthens behavior directly or provides information about positive consequences which is mediated internally, it is an agreed upon fact that when a response is followed by reinforcement its probability of occurrence is increased. Astonishing control of both

animal and human behavior has been achieved through the use of reinforcement, both material and social. In terms of a reinforcement analysis, an individual's behavior is seen as being "shaped" by the pattern or schedule of reinforcement to which he is subject. Just as the rat's initially random behavior becomes smooth and efficient in pressing the lever to get food pellets, so does an individual's behavior become smoothly patterned when it is instrumental to bringing about some desired effect or avoiding a noxious one.

Parents and teachers use the principles of instrumental conditioning naturally when they give or withhold praise as a means of controlling a child's behavior. Reinforcement has been used systematically and with success in more complex situations, such as for improving the behavior of disturbed or retarded children and adults. Some schools have developed programs for enhancing children's achievement through the systematic use of positive reinforcement, by having the teacher give a child a token—like a poker chip—whenever he performs a certain task adequately, be it reading, or addition and substraction, or some other aspect of the learning program. The children can then use these tokens as "money", to buy time for something they want to do. All the procedures that cluster under the label of behavior modification are based on instrumental conditioning, that is, on the control of behavior through reinforcement, and, of course, it is the basis of all programmed instruction.

For reinforcement to be effective, it must follow the response closely in time. Beyond that, much research has been done on the

effects of different schedules of reinforcement. Essentially, there are two possibilities. Reinforcements can be scheduled according to the amount of behavior that occurs or according to the passage of time. In the typical experiments, for example, the pigeon can receive a food pellet, say, after every fifth time that he pecks at the disc or he can receive one after the first response that follows each two-minute interval. In addition, schedules can be fixed or variable, that is, the reinforcement can follow every two minutes or after every fifth response, or it can vary randomly around a mean of, say, two minutes or five responses. It has been found that each type of schedule produces a characteristic pattern of behavior. When reinforcement is scheduled by time, the organism tends to cluster its responses toward the end of the time interval, and then pauses after the reinforcement is received until some time elapses again. When reinforcements are dispensed according to the number of responses emitted, behavior occurs at a constant and high rate, with hardly any pauses after reinforcements.

The whole notion of schedules of reinforcement is based on the fact that, although reinforcement is necessary for a certain behavior to be learned, it is not necessary that it follow every instance of the behavior. If a response is reinforced on a continuous schedule, it will be learned more quickly than if it is reinforced on an intermittent schedule. All the various schedules described above are intermittent schedules. The interesting fact about intermittent as compared to continuous reinforcement is that, although it leads to

slower learning, the learning is much more enduring, more resistant to extinction. A behavior that is acquired through intermittent reinforcement will continue to be emitted for a much longer time after all reinforcement of it stops than the same behavior acquired through continuous reinforcement. In experimental situations, animals have been shown to continue, say, pecking for food thousands of times after they were no longer getting any food by doing so.

Clearly, intermittent reinforcement of behavior is much more common than continuous reinforcement in natural situations. No individual's behavior, even a very young child's, can be so closely and continuously monitored that a particular response can be reinforced every time it occurs. Only in the case of a new or very specialized response being acquired through a computerized instructional program might continuous reinforcement be possible. In general, a response is reinforced sometimes and ignored or even punished at other times.

If one is willing to accept the applicability of these principles to complex human behavior, they make it possible to explain the sometimes almost incomprehensible and often non-rational persistence of certain behavior patterns. An obvious example is the behavior of the gambler, who continues to gamble and lose, winning small amounts very occasionally. If he were never to win at all, presumably his behavior would gradually stop, but as long as he has an occasional success, his behavior is being maintained by as powerful a schedule as it is possible to design. More commonplace examples are

equally available. The parent trying to get his or her child to stop having tantrums or the teaching trying to get a troublemaker to discontinue a particular disrupting pattern. It is not uncommon in such cases for the parent or teacher to ignore incident after incident in the normal course of events, believing, either intuitively or because of some knowledge of the principles of learning, that that is the most effective way to deal with the problem. Every once in a while, however, either because of fatigue or the convergence of other pressures and situational factors, the individual's tolerance is exceeded and he or she "blows up." To the extent that the undesirable behaviors on the part of a child to some extent serve the function of getting an adult's attention, the blow-up is a reinforcement, and, once again, it is being dispensed according to a schedule that is highly effective in maintaining behavior through long periods of non-reinforcement.

In the process of learning through reinforcement, the reinforcements are contingent on the occurrence of the behavior that is being taught—no behavior, no reinforcement. That is why this type of learning is called instrumental learning, because the learned responses are instrumental for getting the valued reinforcement. In a more important sense, however, what happens is that the bahavior is brought under the control of environmental events, under "stimulus control." The essential elements of an instrumental learning situation are the response, the reinforcement, and what is called a discriminative stimulus. For example, a pigeon is typically taught to peck at the

disc for food only when a light is on. That is, pecking at the disc brings food, on whatever schedule, only when the light is on and never when the light is off. The light is a discriminative stimulus because it discriminates between situations when reinforcements are forthcoming and when they are not. After a while, the animal pecks only when the light is on and never when it is off, thus it can be said that the behavior is controlled by the light.

The parallel to everyday situations is not difficult to draw. Our behaviors differ in content and style in different situations, not always or only because we make a deliberate appraisal of what is acceptable or appropriate in each case but because different situations provide different cues that we have long learned to associate with different behaviors. In that sense, our behavior is controlled by the situation. Such a notion is unacceptable to many people and, as a result, the kind of analysis of behavior that underlies reinforcement research as well as the thrust of its findings are rejected or dismissed by many. But in addition to the studies which explicitly manipulate reinforcements to increase or decrease certain forms of behavior with animals, children, or adults, considerable evidence gathered in more natural settings is also available that strongly supports the notion of the environmental control of behavior.

A recent report by David Rosenhan (Science, 1973), for example, offers a vivid illustration of this point. He and seven other individuals, carefully screened for the absence of any psychological disturbance or pathology, got themselves admitted to mental hospitals

in diverse parts of the country by reporting that they heard voices. They were all but one diagnosed as schizophrenic, their deception was not discovered by any member of hospital staffs, and they had a great deal of trouble getting themselves released. Although after admission they behaved normally, and although the histories they reported to the psychiatrists (except for the symptom that got them admitted) were accurate and not altered in any way in the direction of disturbance, in not even one case was their reason for being in the hospital questioned and in some cases their behavior in the hospital was described by the staff as symptomatic of their diagnosed illness. They were finally released with diagnoses of schizophrenia "in remission." It does not seem far-fetched to interpret these events as showing that the perceptions and responses of the hospital staffs were controlled by their working environment. Once an individual was admitted and assumed the role of patient, perceptions and judgments of his behavior were shaped less by the content of the behavior than by its context. It might be hypothesized that, over a period of time, the behavior of the researchers would have also become responsive to the environment and begun to assume disturbed characteristics, unless they had continued to exert considerable effort and had remained actively involved in the researcher role by observing and recording aspects of hospital routine and the behavior of their caretakers.

Another study, that has recently received some publicity in the press (Zimbardo, et al., 1973), demonstrates environmental control even more dramatically. Zimbardo and some of his colleagues simulated

a prison environment and got 21 undergraduates, also screened carefully for pathology or emotional instability, to volunteer to participate. Eleven of them were assigned to be guards and ten of them prisoners, by the flip of a coin. Within two days, the behavior of the two groups bore frightening resemblance to that of guards and prisoners in real prisons. The guards devised ever more clever and cruel means of harassing and controlling the prisoners, the prisoners conspired and mutinied, and the researchers became thoroughly involved in the problem of outwitting the prisoners and keeping them in line. The experiment had to be discontinued after six days, instead of the originally intended two weeks, because five of the volunteers had almost totally broken down and had to be released and it became evident that the effects of the situation were out of the control of any of the participating individuals.

Although how a reinforcement analysis is applicable to these complex natural situations may not be obvious, the extent to which environmental variables overwhelm organismic ones is impressive. The applicability of a reinforcement analysis becomes evident when one probes the situations for the specific factors and processes by which the environmental control occurs. In both the hospital and the prison-experiment situations, a common interpretation of findings would be that the individuals' perceptions and actions were shaped by the roles they held in the social systems involved—roles have requirements and expectations and role occupants must meet them in order to continue playing the roles. But, pressing this further,

precisely how are role behaviors acquired and maintained? The answer is in part through observation of appropriate others and in part through the selective reinforcement of appropriate behaviors by other members of the system. The consequences that the individual seeks and expects, by virtue of being in the role, follow when he meets the expectations of the role and do not when he does not. The latter contingency may never actually be tested, but the negative consequences of not meeting the expectations of a role can be very clear to the individual nonetheless, through explicit verbal instruction or implicit in his understanding of the culture of the system.

The examples from naturalistic settings also reflect the fact that, once behavior is acquired through direct or vicarious reinforcement, the behavior itself acquires reinforcing properties, it becomes in effect self-reinforcing. Thus, although instruction, modeling, and sanctions may be necessary in the learning of role behavior, much of role behavior is maintained because it has itself become satisfying for the individual. This principle is particularly evident with respect to complex human social behavior, but it is equally relevant to any instance of learning through reinforcement and it is clearly important for explaining the maintenance of behavior in the absence of overt environmental consequences.

To the extent that a reinforcement analysis of learning is correct, it applies to learning of cognitive and symbolic responses as much as to learning of overt behaviors. In coming to terms with the role of symbolic

processes—of cognition—in relation to behavior, reinforcement theorists have extended their analysis to construct what have been called "mediational theories" of behavior. There is no need to elaborate on what is involved here at any length, except to note that the relevance of theories of reinforcement does not end when we become interested in "mental" processes, for at least two reasons. In the first place, the learning of ideas, attitudes, beliefs, etc., can be explained in terms of reinforcement contingencies and, secondly, the relationship between these inner processes and action can also be encompassed in reinforcement terms.

The effects of reinforcement on behavior are so ubiquitous that it is difficult to isolate a few examples of its role in political learning. The young child who persuades his mother to bend a rule and the striking worker who receives a wage increase in order to end the strike are both experiencing positive consequences as a result of their behavior and are thus more likely to repeat the behavior when the same or a similar circumstance arises. In one family, the child can make his mother yield by throwing a tantrum. In another family, the mother ignores tantrums but is very responsive to verbal persuasion. In still another family, the mother tries to reward rational pleas but sometimes gives in to a tantrum just to end it. Clearly different learnings will be the result in each of these situations. Most obviously, each child is acquiring a particular pattern with which to deal with his mother's rules and demands. Any behavior pattern, however, is a case of a larger class of behaviors, and it is a well-established fact that learning

generalizes to stimuli similar to the original stimulus and that reinforcement generalizes to responses similar to the originally reinforced one. Thus, for example, one child might use tantrums to try to influence his father, his teacher, and his friends, as well as his mother. In addition, he might try other forms of emotional outbursts for the same purpose.

Other less obvious response-reinforcement relationships are also being established in the above examples. If, say, the mother does yield to the child's verbal plea, not only is that mode of dealing with undesirable rules being reinforced, but so is the use of verbal techniques in general. So is the particular mode of reasoning or argument that the child used successfully, making his mother feel guilty, revealing a logical flaw in her observance of the rule, or evoking fear that her husband would find out and be critical. A behavior pattern, in other words, consists of many elements all of which may be reinforced to different extents by the same set of consequences. These elements may be parts of many other patterns which will thus be affected to some degree by reinforcement in a seemingly remote situation. The nature and extent of the generalizations and ramifications that follow from reinforcements depends in part on the developmental status of the individual. Why and how this is so will be elaborated below when we discuss our conception of the life-span developmental process, but basically it depends on the degree of differentiation that exists in the individual's behavior and responsiveness to the environment and such differentiation is in general correlated with age.

The individual is always experiencing the consequences of his actions or inactions, whether these be positive, negative, or neutral. Thus reinforcement can be said to be a continuous process that consists to a large extent of events not deliberately intended as reinforcements. Any social interaction comprises an ongoing process of mutual reinforcement, even if the individuals' goals in the situation only minimally include their effects upon each other's behavior. An analysis of the reinforcement contingencies in any situation must thus look beyond the evident connections between an individual's behavior and the consequences it directly evokes to discern the links being established between all aspects of behavior on the one hand and all subsequent events, on the other, whatever the reason for the occurrence of these events.

Observational Learning, or Modeling

Many of the behaviors that are socially important are not necessarily learned through a gradual process of reinforcement and punishment but emerge full-blown as a result of the observation of others' behavior. It is possible to analyze observational learning in terms of reinforcement contingencies, but it is possible to discuss it on its own without resolving the issue of whether or not it is merely another form of reinforcement learning.

Considerable research has been done on the variables that determine the nature and extent of learning through observation, that is, of imitation of a model. In the typical study, children are placed in a situation where they observe the behavior of a model (typically but not

necessarily an adult) and then placed in the same situation in which they observed the model behaving. The extent to which their behavior matches that of the model is measured. This has been done with live models and also with TV or film models with essentially the same results.

Starting from the demonstration that considerable matching of behavior occurs, research has demonstrated the role of a number of variables in shaping and modifying the nature of this matching. Some of the generalizations that emerge from this research are that the likelihood of imitation is increased by a nurturant relationship between the observer and the model; by real or assumed similarity between the observer and the model; by prestige, power, competence, or status on the part of the model; and by having the model receive reinforcements for his behavior (or go unpunished if the modeled behavior is socially reprehensible). This last factor, the observation of response consequences to a model, requires some further discussion.

The studies that have shown the enhancing effect upon imitation of observing positive consequences for the model have largely dealt with behaviors generally considered unacceptable. In one such case (Bandura, 1965), although there was some imitation by children who observed a model punished for aggressive behavior, there was greater and more varied imitation among those children who observed the model rewarded or not suffering adverse consequences. However, when after the initial test for imitation the children were offered highly attractive incentives contingent on their reproduction of the model's

responses, the differences among children who had observed the model rewarded, punished, or experiencing no consequences were eliminated. This highlights an important distinction to be made with respect to observational, or any, learning, the distinction between acquisition and performance. Reinforcement, either of the model or of the subject, was necessary to evoke performance, but the behavior had been acquired independently of the reinforcement.

What emerges from studies of the role of reinforcement in observational learning is that, in order to obtain a desired behavior through modeling, it must be made evident to the observer that either the model receives reinforcements for his behavior or the observer will be reinforced for reproducing the model's behavior. This suggests that reinforcement, whether or not it directly strengthens behavior, at least serves the function of conveying information to the observer about the consequences likely to follow, given prevailing conditions, from the modeled behavior. We noted earlier the well-established principle that behavior learned through reinforcement becomes associated to the cues existing under conditions of reinforcement. It would seem that when children observe adult behavior that is novel to them and not in their repertoire, similar discriminating cues may exist in the differences the child has learned between the role requirements, expectations, and prerequisites of adults and children. Thus, seeing an adult model experience positive consequences from a behavior that is novel or seemingly "unchildlike" may not be enough to produce imitation in the child. In such cases,

clear information that the child, too, will experience positive consequences, or at least no negative ones, may be necessary to evoke performance of the behavior, at least in the presence of an adult. The existence of such discriminative cues in the perceived roles of adults, together with the finding that acquisition is independent of reinforcement, can account for the emergence only in adolescence of certain behaviors, such as sexual behavior, which the child has seen modeled since early childhood. When his own situation in life begins to contain the appropriate cues, then the behavior becomes available.

The effects of modeling on the behavior of the observer can also be analyzed as occurring at various levels in a manner parallel to our earlier analysis of the ramifications of the reinforcement of one particular behavior. When, for example, a mother punishes her child for a transgression, in addition to the reinforcement effects that will operate, she is modeling a way of dealing with an undesirable event and a way of expressing anger or frustration. The effects of observing her behavior might thus affect the child's own way of dealing with negative events or feelings within a short span of time. In addition, however, the mother is also modeling a way of being a parent, a way of exercising authority, a way of manipulating another's behavior. The effects of the observation of these aspects may not be reflected in the child's behavior immediately or soon after (except perhaps in fantasy play) but they may still cumulatively influence the child's corresponding patterns at the appropriate times years later. No single observation of

a type of behavior is likely to have long-range effects, but an individual is exposed repeatedly to the same models in the course of development and the behavior of these models tends to be patterned and consistent. Thus, these long-range, or delayed, effects can become potent and stable.

Research in the social learning tradition has demonstrated three separate effects on the behavior of the observer from the observation of models. First, observation can have a simple transmission effect, so that the observer acquires a new behavior or behavior pattern as a result of observing it in another. The second effect is the inhibition or disinhibition of previously learned responses. Inhibition, the decrease in the incidence of a behavior on the part of the observer, follows from the observation of a model receiving punishment for the behavior. Disinhibition, the increase in a previously inhibited behavior, occurs when the model is observed engaging in a negatively sanctioned or anxiety-producing behavior without suffering adverse consequences. A third effect is an eliciting effect, the increase in performance of behaviors in the same general class as the one observed in the model, where behaviors involved are not socially prohibited or otherwise inhibited.

Given the diversity of possible effects of observation, it is clear that observational learning is a continuing process. Not only are many behaviors initially acquired through the imitation of a model but they can continue to be shaped, refined, and even controlled by the behaviors exhibited by subsequent models in new settings. The

diversity of possible effects of models serves to account for the wide range of behaviors exhibited by individuals who at an earlier time had similar experiences but are now in different settings. It also helps to explain the similarities or even homogeneity in the behaviors of individuals who regularly function in the same situations. Thus, for example, "styles" of leadership develop in organizations over time so that different individuals performing the same or similar leadership roles do so in similar manner. At one level, this type of phenomenon is often explained as showing that individuals acquire the common culture of the organization, which includes the delineation of role performance. To further explain, however, how such aspects of organizational culture are acquired, we can hypothesize that they are acquired through the observation of the behavior of existing role incumbents who are observed to experience positive consequences for their performance.

Another focus of accumulating research in the social learning framework has been on the effects of models of acceptable (pro-social) behaviors, using both live and filmed models. Such studies have shown that children can become less aggressive, more altruistic, more helpful, and more cooperative as a result of observing such behaviors. Of course, imitation, of a desirable or an undesirable behavior, is not necessarily or immediately perfect. Once an observed response has been learned, the skill or effectiveness with which it will be reproduced will depend on a number of factors, among them the opportunities available to the individual to enact the learning. This further contingency helps to account for performance differences between individuals who have been

exposed to the same models. Different roles allow individuals different degrees of freedom to engage in certain behaviors. Thus, although the learning itself may be comparable, the adequacy of the performances may differ because of the amount of practice in which the different individuals have been able or forced to engage, as well as because of the differential reinforcements for the behavior that the culture makes available to different roles.

These complex contingencies of the effects of modeling would seem relevant to differences between the political learning of girls and boys, of men and women. Although both sexes are to a large extent exposed to the same models of political behavior, starting in the family and the classroom and continuing out into the larger society, it is a rather well-established fact that their political orientations and behaviors differ. A closer analysis of the observational learning in which they engage does away with this seeming discrepancy by revealing that the effective modeling influences to which they are subject are in fact quite different. The models of political behavior that are available are sharply differentiated by sex, so that both females and males observe different types of political behavior engaged in by the two sexes. This is as true of formal institutionalized political behavior, where men dominate in positions of importance, as it is of the broader and more pervasive forms of political behavior that occur in daily interpersonal interaction, where the cultural sex-role standards dictate very different behaviors for males and females with respect to such dimensions as assertiveness, initiative, handling of conflict, modes of

interacting with and influencing others, and competitiveness and cooperativeness. Thus, although both sexes are exposed to the same models, these models have distinctive cues associated with them, because of the power of sex-role standards, that have very different consequences for the two sexes. Girls see men modeling certain forms of political behavior, but they also see the differences in the political behaviors of men and women, and their behavior is to a large extent under the control of sex-role cues. As they observe male models, part of the learning that results is that their behavior is male, not female, behavior. Thus, they may learn it, but they will not perform it. For the learning to be reflected in adequate performance, at least two factors are important, the reinforcement contingencies for such performance and the opportunities to engage in the behavior and thus to perfect it. Once again, it is clear that the prevailing culture promises very different rewards to females and males for the exercise of power, for taking leadership, for rational judgment undistorted by wish and emotion, for perseverance in pursuit of a goal. The incentives to engage in such behaviors are thus different for the two sexes, leading to a greater likelihood that, in this case, males will engage in them and that they will do so more skillfully and effectively.

In addition to the identification of factors that make imitation of overt behavior more likely, research on observational learning has demonstrated that imitation of more covert and subtle processes follows the same principles. Evidence for this emerged in one of the first studies to expose children to an adult model behaving aggressively and

then measure the extent of their imitation (Bandura, Ross, & Ross, 1961). In addition to the imitation of the aggressive behavior, the children imitated other nonaggressive behaviors, gestures, and stylistic aspects of the model's behavior. Similarly, in a study (Bandura & Huston, 1961) where children observed a model solve a simple problem and then had an opportunity to solve it themselves, in addition to evidence that they had learned the solution by observing it, and thus could reproduce it, a variety of other motions and behaviors were imitated that were irrelevant to solving the problem.

Other studies have shown that a prestigeful model can increase observers' liking for stimulus objects by expressing strong preference and making positive statements about the objects. Awareness of this process underlies, of course, advertisements where a noted personality extols the virtues of a particular brand of cigarette, cereal, or car. But changes of more complex attitudes through exposure to a model have also been demonstrated, as in an unpublished study by Carlin in which "young children showed a greater preference for deferred gratification after having observed an adult model display positive affective reactions while waiting for delayed rewards than when the model expressed negative emotional reactions during the imposed delay period and devalued the goal object" (Bandura, 1969, p. 244).

This thread of evidence goes a long way toward explaining similarity in style, attitudes, beliefs, values, and personality characteristics in general that can be observed between children and their parents or between individuals and others with whom they interact

frequently or whom they value highly. Children of course do not imitate and incorporate permanently into their repertoire every behavior they observe, even when performed by influential models. To the extent that a child is shaped by the behavior of models, there are a large number of models that are influential, starting with parents but soon extending to other adults and, even in early childhood, to peers. What gets reproduced in the individual's patterns is a unique combination of elements adopted from various models. Thus children raised by the same two parents display different patterns of resemblance to their parental models.

Studies of observational learning have generally been done with children, but as we have already suggested, the role of models in shaping and eliciting behavior is clearly not limited to childhood. We learn to perform new tasks and acquire new skills at all ages, and we do so more often than not by imitating either another's behavior or a verbal description of the desired behavior. This is as true of the learning of new physical skills, such as driving a car or playing tennis, as it is of complex social skills, such as delivering a professional paper or performing in a new job. There are of course differences between the observational learning of children and adults. The more mature the individual, the more able he will be to represent symbolically what he observes and to evaluate it. Thus, the more mature individual will be able to be more selective in what he does and what he does not imitate, while at the same time he will also be more effective in reproducing the observed behavior quickly and accurately. In addition, with increasing age, the effects of models probably become

primarily inhibiting, disinhibiting, and eliciting effects, rather than strictly learning ones.

Given our broad definition of political learning, it is evident that individuals of any age are continuously exposed to political models. As we will attempt to illustrate more fully below when we bring together the various separate learning processes to account for the learning that occurs in real settings, every social situation is likely to offer the individual at least some models of some dimensions of political functioning. For example, the child in a classroom is likely to observe, on any ordinary day, instances of the exercise of authority, of various forms of conflict and its resolution, of rule enforcement, of diverse attempts at interpersonal influence, and so on. Similarly, the young instructor attending his first faculty meeting is likely to also observe instances of authority, conflict and conflict resolution, rule enforcement, and interpersonal influence, as well as, perhaps, bargaining, compromise, stalemate, and some others. By our definition of political, these events would be political events the observation of which has learning consequences for the observer.

The nature of these learning consequences is determined by a multitude of factors, such as the reinforcement consequences for the model, the relative statuses of the model and observer, the relationship between them, the similarity between them perceived by the observer, and many others. The point in development at which the modeling influence occurs will also be of crucial importance in the nature of the learning consequences. As we have already noted, simple transmission effects are

likely to occur at earlier ages, and inhibiting, disinhibiting, and facilitating effects are likely to predominate at later ages. Related to this, at different points in development the individual will have different kinds and amounts of behavior in his repertory relevant to what he observes in a model. Thus, the observation will have different meanings and build on different bases at different ages, leading to more generalized effects earlier and more specific and differentiated ones later. This will be discussed more fully when we present our views of the course of development below. Before doing that, we must deal with one more aspect or type of learning that is generally analyzed in terms of very different concepts than those we have used so far.

Cognitive Assimilation and Accommodation

Reinforcement and social learning researchers often deal with cognition either as a focus of study or as a mediating process invoked to explain their observations, but the bulk of concern with cognitive processes comes from vastly different points of view. One of these, represented by Piaget and his many followers, is generally referred to as the cognitive-developmental or the stage-developmental approach and it offers a range of concepts and insights that make an essential contribution to a full account of learning and development. Piaget's interest in intellectual development grows out of his concern with how organisms adapt to their environments. He considers all of the activity of any organism as an aspect of its adaptation and views intelligence and intellectual functioning in this context. His stage theory of cognitive development is his answer to the question of how the simple reflexes of

the newborn human individual eventually become the complex intellectual processes of the adolescent and adult. In order to survive and function, the individual must adapt to the environment, that is, he must both mold himself to the environment and mold the environment to his needs and he must keep these two processes in some sort of equilibrium. Animals adapt through physical means. Human beings start out the same way, but their adaptation soon becomes largely and then primarily cognitive.

Cognitive processes, according to Piaget, are representations of events and experiences. These representations, which he calls schemas, enable the individual to organize the environment and his relationship to it and thus to deal with it, to adapt. Therefore, the nature of the individual's adaptation is determined by his experience with the environment and it is only through such experience that cognitive development can occur. Cognitive development is a continuous cumulative process in which every step builds on what has come before. What the individual learns from a given experience is partly determined by how he represents and organizes that experience cognitively, but this depends on the schemas he has available to apply to the experience, and these are the products of prior experience. Piaget's theory of cognitive development deals with the systematic changes that cognitive structures, or schemas, undergo from birth to adulthood and its major thesis is that they go through a fixed sequence of stages that are qualitatively different from each other but each of which is a restructuring of the prior one.

As we have indicated, Piaget sees intellectual functioning as an integral aspect of biological adaptation and he sees it as encompassing

three interrelated processes: assimilation, accommodation, and equilibration. Given a new input from the environment, the organism can react in either of two ways. It can change the input so that it fits with existing schemas or it can alter existing schemas to fit the input. The first process is assimilation, the second, accommodation. All learning, all cognitive change, according to Piaget, occurs, and can only occur, through these two processes. The goal is always assimilation, as after accommodation is completed there exists a new schema into which similar inputs will subsequently be assimilated. But a balance is maintained between the two processes so that neither dominates, and this balancing process is equilibration. The movement toward equilibrium between the two processes is not a static adjustment, not merely a balance of forces, but it is an active process of self-regulation which is an inherent part of adaptation.

In terms of Piaget's concepts, cognitive development occurs somewhat as follows. The newborn brings into the world two basic schemas which are his only tools for organizing environmental events and adapting to them, the reflexes of grasping and sucking. All stimuli that are encountered are indiscriminately assimilated to these two schemas. Gradually, discriminations begin to develop so that not everything that touches the infant's hand is grasped at and he sucks only at food stimuli. These are the first rudimentary accommodations and, through them, new schemas develop. As maturation and experience proceed, and gradually language emerges, schemas become more complex, less physical, and intellectual adaptation becomes an

internal process. But later cognitive structures are the cumulative products of earlier ones, having been produced by the continuing interaction between assimilation and accommodation. "If the child partly explains the adult, it can also be said that each period of his development partly explains the periods that follow....mental development during the first eighteen months of life is particularly important, for it is during this time that the child constructs all the cognitive substructures that will serve as a point of departure for his later perceptive and intellectual development...."(Piaget & Inhelder, 1969, p. 3). .

Thus, the origins of cognition are in sensorimotor experience. Before he can represent the environment symbolically, the individual develops modes of adapting to it and these are purely physical. These physical adaptations, or sensorimotor schemas, gradually become internalized as the organism's capacities evolve, so that they do not need to be acted out in full to accomplish their adaptive function. The ability to represent events and interactions symbolically takes a giant leap with the emergence of language around age two and from that point on adaptation is primarily cognitive. The path from the toddler's rudimentary symbolizations and internalizations to mature thinking must still be traversed step by step, and the content of Piaget's stages of cognitive development are crystallizations of major distinctions in the quality, process, and content of thinking as it evolves through the individual's continuing adaptation.

Although the Piagetian point of view conceives of the individual's capacities as evolving through a fixed sequence in part because of basic

properties of the human organism, a primary implication of Piagetian theory is that development is contingent on experience. Thus, whether or not an individual will reach the most advanced level of thought and the speed with which he will do so are not given. They are in part determined by heredity and maturation, but the naturally endowed potential can only develop through the processes of assimilation, accommodation, and equilibration that occur when the individual interacts directly with—experiences—the environment. It follows that the kinds of experiences available to the child and the appropriateness of their timing in relation to his current capacities are crucial to the content and pace of his cognitive development.

With respect to the timing of experience, some general principles are clearly implied by Piagetian theory. If change in cognitive structures occurs always and only through assimilation and accommodation, then experiences from which an individual can learn must have two characteristics in relation to the individual. They must, in the first place, be such that the individual has some existing schemas with which to deal with them. But, secondly, the experiences must be somewhat discrepant from the individual's existing schemas, just discrepant enough to evoke accommodation but not so much as to lead to no learning or to distorted assimilation. That is, one possible response to a stimulus, which is so different from any of the individual's currently available schemas that he cannot alter any of them enough to accommodate to it, is to distort the stimulus sufficiently to make it fit with an available schema. Oversimplication of complex phenomena is one example of this process. An alternative

response to such a situation is to reject or ignore the stimulus, and thus to not learn from it. The timing of experience in order to maximize learning and development thus requires, first, a knowledge of the individual's existing relevant schemas and, second, the design of experiences so that they are just different enought from these existing schemas to produce productive accommodation.

Piaget's description of the sequence of cognitive development provides a picture of some of the major characteristics of cognitive structure, of existing schemas, at different points in development. Although his theory is a stage theory and the stages are conceived as qualitatively distinct, the theory nonetheless sees development as continuous and the transition from one stage to the next as gradual. Thus, we can plot the logic of development as represented in Piaget's theory without necessarily accepting the validity of the stage notion or of all the specific steps that Piaget considers essential.

As we have already noted, cognitive development begins with sensorimotor adaptations, which build on the simple responses of the newborn and gradually become increasingly internal and symbolic. As is true at any age, the child can directly experience only himself and his interactions with the environment and it is only after considerable development has occurred that the individual becomes capable of representing events that he has not experienced directly. Thus, early cognitive structures are limited to what the child experiences directly.

This quality of early thought is captured in part in Piaget's concept of egocentrism, by which he refers to the tendency to structure

the world entirely from the point of view of the self and to take into account only what is known or directly perceived by the self. In terms of the logic of Piaget's conception of cognitive development, egocentrism is a natural phase that it is necessary to go through on the way to the development of mature thought. The individual starts by developing concepts from his own experience. Eventually, his experience comes to include the concepts and perceptions of others and he must, always through assimilation and accommodation, integrate these into his developing cognitive apparatus. When this happens, egocentrism begins to yield. Indeed, Piaget considers peer interaction to be the single most important factor accounting for the decline of egocentrism. Implicit in this formulation, however, is the fact that egocentrism will persist in areas where the individual does not have occasion to encounter the perhaps different concepts of others and it is likely to recur at any point in the life-span when the individual deals with an area which is entirely unfamiliar to him.

Closely related to egocentrism are a cluster of other qualities of thought that also constitute a necessary developmental phase. These are all derivatives of the limitation of the child's cognitive structures to what he experiences directly and they reveal, by contrast, the tremendous complexity that mature thought involves. Moreover, these limitations have important consequences. Thus, for example, the child's thinking about a situation will be influenced by whatever aspect of that situation is most salient perceptually—the brightest, loudest, biggest, nearest, or last seen. Whatever intrinsic organization may exist in the situation will not affect how the child organizes it as much as the more

evident features of its perceptual organization. This characteristic of the child's thinking limits the depth of his understanding and also can seriously distort his causal reasoning. For example, the young child tends to attribute a causal relationship to events that occur together: "It is afternoon because I'm going to take a nap." "It's the leaves moving that make the wind." The child at this stage reasons from percept to percept and not with concepts.

Even after age six or seven or eight (depending on the individual child), however, when the child has considerable ability to manipulate symbols and concepts, his logical capacities are still very much tied to his perceptions. Thus, a child of this age might not be able to solve a geometrical problem presented to him verbally, for example, but could manage it with ease if he could manipulate sticks and shapes to represent the problem and its solution.

Another expression of the limitations of the child's thought until late childhood to the here and now is what is referred to as the attitude of realism. The child cannot distinguish well—not at all at the outset— among different levels of reality such as words, thoughts, observed events, dreams, feelings. What he sees, says, or thinks are equally real and objective to him. His name is him. He has no concept of words as arbitrary man-made conveniences. They are as much parts of the objects they denote as are physical characteristics. Thus, it is very difficult for him to understand the meaning of words that do not refer to specific concrete objects. He learns to use words such as time, love, life, and other abstract

labels with considerable appropriateness; but if his own understanding of these words is probed, specific objects, events, or actions will be revealed as carrying the meaning. He can understand who the President is, because he can see him and hear him and read about him; but he cannot really grasp what the Presidency is. He is aware of the nation having many people, all of whom do certain things relevant to politics and government, such as vote, read the newspaper, write letters, protest, picket, etc. But he cannot understand, beyond those concrete acts, what is meant by citizenship, or the citizenry, or public opinion.

Another limitation of the child's thought which is also related to the dominance of what is perceptaully salient is his inability to perform what is called multiple classification. Children can classify objects according to common characteristics at quite an early age: if given some blue and red chips and asked to put all the ones that are alike together, they will readily sort them into two color piles. But if the young child is given red and blue chips some of which are circles and some of which are squares, and given the same instructions, his classification will be more erratic. He may pick up three red squares and put them together, and then see a red circle and put it in the same pile, and then continue adding circles of either color, and so on. What would be revealed is that he cannot maintain more than one dimension at a time as his sorting basis and that the dimension he uses is likely to be determined by what is perceptually most salient at each point. The ability to deal with multiple classification develops gradually through the childhood years, different children attaining it at different ages; but it is often not a stable ability until the later elementary years.

What is the relevance of multiple classification for more general aspects of learning? What is involved, beyond the ability to categorize in terms of multiple criteria, is the ability to deal with a single object or event in terms of its membership in two different classes. In the sorting example, the child was being asked to deal with a chip as both "red" and "a square" at the same time, seeing the dimensions both together and individually; or to see that the class "squares" included both red and blue squares. It does not seem hard to think of analogues of these problems in both everyday social situations and in aspects of the larger social and political world that we gradually come to understand. Here are some examples of familiar situations and relationships whose understanding requires the ability to deal with multiple classes: the teacher, who has authority over the classroom, is under the authority of the principal, who is under the authority of the superintendent; one's parents are sister and brother to one's aunts and uncles who are mothers and fathers to one's cousins; one lives in Columbus, but one also lives in Ohio, and one also lives in the United States; thus one is a citizen of Columbus, an Ohioan, and an American. It is evident that all the qualities of children's thought, such as realism, egocentrism, perception-boundedness, are together relevant to the development of the ability to deal with multiple dimensions simultaneously or to deal with classes and sub-classes. And it is also evident that this deceptively simple ability is central to understanding much of social and political life.

As a result of both maturation and experience, but in ways that Piagetian theory does not fully explain, the developing individual's

thought is gradually freed from the concreteness just described and he moves toward the higher levels of human thought which can function without any reference to observed events. That is, the continued interaction of the individual with the events of the environment and the patterning of these events, together with the continuing assimilation of these into his working schemas and their modification to adapt to novelty, gradually produces mental representations of these events and patterns that are sufficiently stable and autonomous that the individual can manipulate them as substitutes for the reality without the need to refer to that reality. This transition, which occurs at the very end of childhood and beginning of adolescence, is the transition from concrete to formal operations and it represents in Piaget's scheme the final step in the development of thought. From that point on change continues to occur but it is not change in the basic structure of schemas but rather in their content, refinement, elaboration, and complexity.*

Can Piaget's views be related to the concepts and findings of conditioning, reinforcement, and observational learning? We have emphasized repeatedly that all the processes we have discussed operate jointly to produce the complex products encompassed by our definition of political learning. The links among conditioning, reinforcement,

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*In a recent paper, Riegel (1973) argues that Piaget's theory does not account for the highest levels of human thought (e.g., creative scientific thought) and that formal operations do not describe the thinking of mature adults. He offers an extended and modified model of cognitive development founded on a "creative, dialectic basis" and capable of dealing with the implicit contradictions that characterize both modern scientific thinking and common thought.

and modeling are fairly evident and simple to infer because the three processes are treated with similar and mutually compatible concepts. Piaget's scheme, however, is addressed to a different realm of learning and the concepts it uses and conclusions it reaches seem remote from the behavioral events dealt with in the other approaches. These differences reflect some fundamental and important philosophical differences, which it does not seem fruitful to pursue here. For our purposes, the differences can be seen as differences of focus. That is, the behavioral approaches and the Piagetian approach focus on different aspects of the overall process of learning and development. Thus, their findings and conclusions are not incompatible but complementary, and it is useful at this point to indicate how this is so.

Piagetian theory says that in the course of a child's typical interaction with the physical and social environment, he will have experiences which will allow his cognitive capacities to evolve. The theory leaves vague, however, the specific content of this organism-environment encounter or interaction. What particular stimuli in the environment, when responded to with what particular responses, contribute to what specific learnings? In order to address such a question, it is necessary to analyze the learning situation in terms such as those used in discussions of conditioning, reinforcement, and modeling. Stated differently, to talk about assimilation and accommodation is to talk about content and change of cognitive entities as a result of behavioral interactions with the environment. Such a focus implies, but also ignores, the nature of the interaction which gives rise to assimilation and

accommodation. In other words, interaction with the environment comprises both physical and social stimuli and the individual's affective, cognitive, and behavioral responses to these. Piagetian theory does not deal with the question of whether all of these elements are always involved in an interaction or, if not, which are and which are not. The theory is concerned with cognitive consequences and takes the behavioral process for granted, except to assert that it is necessary. Approaches that deal with the behavioral aspects of learning, conversely, tend to deal with cognitive processes only to the extent that these can enhance the predictability of behavior. Thus, the two do not constitute conflicting or divergent analyses of the same phenomena but, rather, independent views of different aspects of the same phenomena.

Let us look, for example, at the Piagetian view of a child's learning about the physical world. Through the manipulation of physical objects and events—touching, lifting, poking, throwing, tasting, breaking—the child gradually infers the properties of the physical environment, such as weight, texture, volume, and gravity. Examining such manipulation more closely, it is clear that processes of conditioning and reinforcement are at work. The young child tries to put a large box into a smaller one and it doesn't work. He continues to probe and, suddenly, by trial and error, he puts the small box into the larger one and it works. In terms of the specific motivation in the situation, that is a reinforcing event, which makes a contribution to the child's learning about seriation and relative size, as well as reinforcing the child's tendencies to manipulate

objects. Moreover, it induces positive affect toward the activity, toward his own behavior, and perhaps toward the specific learning that has occurred. In addition to his own experimentation, the child is constantly observing others engaged with the physical environment, observing the operation of physical principles which he is beginning to understand, being puzzled by events which he does not understand and which he then tries to recreate, and being reinforced vicariously when he sees others engage in familiar behaviors.

The operation of behavioral learning processes is just as clear with respect to social phenomena. As we noted earlier, Piaget considers interaction with peers to be the major factor accounting for the decline of egocentrism. What actually happens in a situation of peer interaction? Suppose the individual expresses an opinion and another individual disagrees and expresses his own different opinion. In addition to the sheer cognitive aspects of the exposure to such a discrepancy, the individual is exposed to a model of a different way of viewing a situation. He is also seeing modeled another way of expressing an opinion and expressing disagreement. If a discussion or argument occurs, there will be opportunity for the conditioning of positive or negative affect toward specific ideas, toward the other person, and toward such situations of interpersonal conflict. If the individual "wins" the argument, his original views will have been reinforced, as will his mode of reasoning and arguing. The situation will thus evoke assimilation and accommodation involving a number of schemas through specific stimulus-response events. A full account of the learning that occurs must deal with these events as much as with the cognitive outcomes.

Having suggested how Piaget's theory of cognitive development can be linked to a behavioral view of learning, it is still necessary to ask how a Piagetian view of cognitive development sheds light on political learning and development. Our broad definition of politics and our view that political phenomena are embedded in the interpersonal worlds of all individuals at all ages lead us to draw some rather clear connections. The individual is assimilating and accommodating to political phenomena all the time, that is, developing political schemas and elaborating and modifying them in light of his continuing experience. At early ages, these schemas (ways of organizing and dealing with the environment) are probably mostly behavioral, and become increasingly verbal and abstract with age. Thus even the very young child has patterned and stable ways of adapting to the demands of authority, to attempts to influence him, to cooperative and competitive situations, and so on. He may not be able to verbalize either his adaptations or a description of the phenomena to which he adapts, but observation will nonetheless reveal the kind of structure and stability that are characteristic of schemas. In this sense, it may not be meaningful to ask whether the child at such an early age "understands" political phenomena, unless it is clearly specified whether by understanding one refers to the ability to verbally articulate the events or to the ability to deal with the events in a patterned and effective manner.

As his cognitive capacities evolve, through experience with the political and nonpolitical aspects of his world, the individual's ability to abstract from his experience, to discern regularities, to

derive implications from events and apply them to other events all increase. Thus, with development, the individual becomes able not only to adapt to political phenomena but to observe them; he learns not only how to deal with them more and more effectively and maturely but also how to perceive and anticipate political phenomena in the experiences of others as well as in his own. It is in this context that the growing individual's learning about government and formal political institutions and processes can be best understood. As the child learns from an early age to adapt to authority, power, influence, leadership, and so on, in his immediate world, he also from a relatively early age hears about and observes—on TV, in newspapers, and through the conversations and explanations of adults—comparable phenomena in the remote world of the formal political system. Sometimes the parallels are obvious to him, depending on his age, and sometimes they are drawn by adults in their attempts to explain a political event in the news. Thus, for example. in explaining a matter related to law enforcement to a young child, adults will frequently liken it to issues of rules with which the child is familiar in the home, the peer group, and the school. In effect, the adult in such a case is facilitating the processes of accommodation and assimilation by evoking the relevant existing schema from the child's own experiences and guiding him in making the connection to the more remote situation.

We are saying, in other words, that the child's adaptations to—his learnings from—his interpersonal experiences constitute the basis for the development of his understanding of the larger system. The

Piagetian view of the child's development of concepts about the physical world is that it is a gradual process based on the child's direct manipulation of physical objects. The child works inductively from the outcomes of his sensorimotor experiences toward the construction of increasingly abstract concepts to represent these experiences and manipulate them symbolically. From his direct manipulation of physical reality he develops, among others, concepts of object permanence, of number, of mass and volume. It is only in terms of these directly developed concepts that he learns more remote and complex physical relationships that he might be taught formally.

With respect to the development of social and political concepts, it would seem that the child's experiences with the phenomena of his interpersonal world constitute the parallel to the child's manipulations of physical objects. His understanding of the more remote political world thus builds on and is shaped by the schemas he has derived from his interpersonal experiences. It should also follow from this that, just as there is a logical sequence in the learning of certain physical concepts so that certain aspects of understanding cannot occur until others have preceded, so might there be some such sequence in the development of concepts about political phenomena. Whatever such a sequence might be, this application of the logic of Piaget's views to political concepts leads to the hypothesis that each individual's development of an understanding of political phenomena will follow a natural progression whose sequence and content will be dictated by the experiences that his interpersonal world provides him. This will be

true with respect to the politics of his immediate world as well as of the more remote institutional world, but we are hypothesizing in addition that development with respect to the former underlies, and therefore precedes, development with respect to the latter.

The process of learning about the political phenomena of the interpersonal world is a slow and gradual one. As we have already suggested, learning about it behaviorally occurs first and cognitive understanding of what has already been dealt with in action follows later. Since learning about the formal political system can only be cognitive, because the child has no way of directly experiencing and manipulating the events of that world to develop behavioral adaptations to it, it follows that such learning is not likely to be extensive or stable until relatively late in childhood. This coincides with the conclusion of many political socialization researchers, who have studied primarily children's perceptions and understanding of the formal and institutionalized aspects of politics, that it is not fruitful to study young children. Gallatin and Adelson, for example, having raised some questions about how a child's "grasp of political principles matures," go on to say that, "Insofar as it provides a basis for inference, previous research indicates that the answers to such questions should be sought among adolescents rather than children....Indeed, studies already conducted by the present authors and associates confirm the impression that the preadolescent youngster is in many respects unable to comprehend political principles" (Gallatin & Adelson, 1971, p. 94).

Related empirical support for this point is provided by a study by Pauline Vaillancourt who surveyed 1,000 young people ranging in ages from 9 to 15 on their party identification, their estimate of the importance of party identification for adults, their level of political participation, their level of political interest, and their image of the president, as well as on background characteristics and mass media consumption habits. Vaillancourt's major finding is that these children's attitudes had very low stability across three waves of a questionnaire administered over a six-month period. Vaillancourt concludes that,"...as far as attitude questions are concerned, this may be due to the fact that many children do not have political attitudes on the topics about which they are questioned." She then goes on the say, "We should re-examine closely what in this field has been so carelessly labelled an 'attitude.' If an attitude is a'relatively enduring predispostion,' then the implications of observed low levels of stability are that it may be presumptuous to discuss the 'attitudes' of children. It would perhaps be better only to dicuss what might be called embryonic forms of attitudes. On many topics, political predispositions are probably not 'enduring' as is the case with valid attitudes, but rather quite transient" (Vaillancourt, 1972, p. 22).

Such verbal responses with respect to the larger political system would be transient, in terms of our line of reasoning here, because they would reflect only rote verbal learnings of what children have heard, read, or been taught, instead of reflecting a concept which the child is able to use to think about politics. Stable attitudes might be

uncovered at relatively early ages if the political attitude objects were drawn from the more immediate political systems of the family, peer group, and school in which the child functions.

In his book The Child's Construction of Politics, R. W. Connell addresses himself to the question of how Piagetian concepts are relevant to the child's understanding of politics. He comes to conclusions that may seem different from ours, but the two can be integrated in terms of the above discussion. It will be necessary to quote from Connell at some length in order to do so. He says,

> We must distinguish thought about immediate social relationships, intimate personal contacts, from thought about society on the large scale. Politics is part of the latter; and here is the first main difference we must allow for. The children's political thought differs from their thought about such well-studied features of the physical world as number, weight and volume, spatial relationships, etc., in that the objects of thought are at a distance from the child rather than immediately accessible to him (Connell, 1971, p. 228).

By distance he means both "subjective distance, a consciousness of being remote from the subject-matter," and "objective social distance," the fact that "children learn about politicans and political events through other people, their contact with politics is indirect." Quoting again from Connell to get the full picture of his reasoning on this point:

> The children can exert no influence on politics themselves. Now a child learns about the physical world in large measure by operating on it, by holding, biting, and moving toys, by walking around a playground, by squashing plasticine, by dismantling a car engine. He learns about his intimate social environment also, in larg measure, through the reactions of others to his own advances and enter-

> prises. But the child cannot do this to his political environment, which is as much outside his control as the weather. This means that he cannot test his political conceptions against the reactions of their objects to his actions. Direct feedback effects which seem to play a large part in the control of learning about the familiar reality, and the persistence of gross misconceptions (e.g. about the Queen's power) and implausible myths (e.g. about the Viet Cong invading Australia) is made possible. There is, however a shorter feedback loop which does operate in political questions, that from the child to familiar adults to the child; we have seen some examples of this, and I suspect that it is more important than the interviews actually prove.
>
> The distance between the child and politics, and the intermediary role of adults, make this learning situation substantially different from the child's basic learning about his physical environment. The object of the child's political thought, the thing we have called 'the political world,' is itself part of society. Ideas other men have conceived and expressed, relationships other men have set up and changed, actions other men have taken, are the subject-matter of the children's political thought.
>
> In this sense all of the children's ideas about politics are derivative, and in this sense their political thought is entirely a social product. It is clear that we are a long way indeed from the paradigm situation in Piaget's researches, the direct construction by the child of interpretations of his environment independent of adults and their thought. Here we are dealing with a situation where the child's basic task is to master certain forms and realizations of adult thought and where the materials for doing so are manufactured and supplied by adults. Clearly, the stages in the development of children's thinking identified by Piaget and others will be inapplicable in detail, because of the constant intrusions of adult thought-forms into the child's thinking, because in fact adult thought is here the stuff of the children's construction (Connell, 1971, pp. 229-230).

Connell then goes on to say that children's constructions of politics can nonetheless be seen as passing through a sequence of stages and he spells out what these are. On the basis of the research he reports in

his book, he distinguishes two elements in children's political beliefs each of which undergoes a different sequence of development. The first is children's "understanding and interpretations of politics," for which he identifies four stages of development, and the second is children's "political stances, their evaluations and commitments to action," which he sees as developing through three stages.

Although Connell defines the politics that children learn about as the formal institutionalized processes of government, his conclusions are not incompatible with our views of children's political learning from their interpersonal experience. What our formulation adds, in effect, is another element to the cognitive base on which children's learning about political institutions builds. This additional element consists of the schemas with which the child organizes those experiences in his immediate interpersonal world that are essentially political. Thus, for example, a child's understanding of the power of the President is built on whatever cognitive structures he has developed relative to authority from his experiences with parents, teachers, principals, and other adults, as well as on the specific information and affect transmitted to him by the adult world, in deliberate explanations, in conversations that the child hears, and through the mass media. The two elements—those directly induced from experience and those mediated by adults—undoubtedly combine in a complex manner that needs to be analyzed and studied empirically.

Connell himself reasons in a very similar manner with respect to what he calls the "threat schema" in children's views of war. He found that the children consistently expressed the fear that their

country (Australia) was threatened by war and in many cases this was the justification for the country engaging in war itself, to ward off the threat. Connell says,

> The evidence of such passages is that children develop a sense of some external menace before they have much concrete detail about Vietnam, sometimes before they have heard of this war, certainly before they know much about those participating. As we argued in chapter 1, the young children do not draw a boundary between the political world and other spheres of life and imagination; we can see this in Adam's fantasy about shooting one of the invaders with his father's gun, and Susan's drift from soldiers and bad men to Captain Cook, knights, dragons, and dinosaurs. Stories of soldiers are assimilated to other dangers; and the military threat, and details about Vietnam when they are acquired, are assimilated to the primitive, diffuse fears of early childhood.
>
> The idea of an external threat to the country thus becomes charged at an early age with personal emotion, with fears of violent intrusion into the 'nice and safe' places of the child's own life. We will not be far out if we trace the affect-laden threat schemata of later childhood and adolescence to these roots. At later ages, naturally, as the children construct an image of the political order, the threat is placed more firmly in a political context. Where the young children talk of 'baddies' coming to the land, the older children, as we have seen, speak of the Vietnamese and the Viet Cong coming to take over; later again it becomes the communists (Connell, 1971, p. 102).

Although Connell sees the origins of the threat schema as lying in early emotions and not in experiences with the immediate world, the logic by which he links the later conceptions to early origins seems to be the same as ours. His analysis of the threat schema and its development also provides a nice example of how a basic Piagetian

concept can be specified and applied to the development of political thought. Both our own and Connell's line of reasoning suggest that a number of such basic schemas should be identifiable with respect to politics and that it should be possible to trace their development, as they become more specified and at the same time more extended to the remote world of political institutions and events.

The Convergence of the Four Components

Having discussed the various ways in which people learn, it is now necessary to relate the separate processes in some coherent fashion that will enlarge our understanding of political learning in the real-life situations in which human individuals grow and develop. As we stated at the outset, the various forms or types of learning do not occur separately, at different times and in different situations, but are all simultaneous elements of the total learning that results from any experience. That is, whenever and by whatever process learning occurs, the resulting acquisition includes three levels—affect, cognition, and behavior. When an individual imitates a behavior he has observed, he also develops and stores some cognitive picture or interpretation of it, however rudimentary, and some affective judgment about it. Similarly, when an individual understands a new concept, such as gravity, volume, cooperation, or majority rule, this cognitive change has consequences, not only for what he is subsequently capable of dealing with cognitively, but also for the likelihood of his engaging in certain behaviors and for his emotional reactions to a variety of events. Thus, the child who understands volume will be more likely

than one who does not to pick the right size container to do a certain job and will feel a different mix of surprise, pleasure, and frustration when the liquid does or does not run over. A child who understands the concept of majority rule, as compared to one who does not, will have different alternatives available to him in a situation where a group must reach a decision and will experience a different configuration of feelings of elation, dismay, or acceptance when the group's decision goes with or against his own preferences. A similar argument can be made about any learning event, whether its major outcome be affective, cognitive, or behavioral.

In natural situations, not only do the four types of learning occur simultaneously and interrelatedly, but learning about a variety of objects and events is also occurring simultaneously. To illustrate this point, let us imagine two situations, one with children and one with adults, and identify some of the opportunities for political learning that they make available.

Imagine first a third- or fourth-grade classroom. The teacher announces that the school has made arrangements for some children from this class to visit a local candy factory, but the manager of the factory has asked that the group be limited to only 10 children. The teacher says that all those who would be interested in going should write their names on a piece of paper and she will choose ten children from among all those who ask to go. Many more than ten children scramble for paper and pencil and rush to turn their names in. As the teacher collects all the names, one boy raises his hand and says that he doesn't

thinks the procedure is fair. Why doesn't she ask each child why he or she wants to go? Then she can choose the ones that have good reasons to go and are not going just to get some free candy. A girl raises her hand and says that she feels that ten girls should be chosen because only boys went on the last field trip. Other hands shoot up, other ideas are expressed, and much argument ensues. The teacher finally brings it to an end and says that she will have to decide. At the end of the afternoon she announces ten names.

What opportunities for political learning does this situation offer? The teacher is modeling a certain way of exercising authority. The children who object to her procedure are modeling for their classmates behavior which reflects a sense of efficacy and a belief that the teacher might be influenced. The teacher's response to these children will provide positive or negative reinforcement for their behavior, which will have direct consequences for them and vicarious ones for the others who are observing, with respect to the future probability of engaging in such behavior. The children who speak up are also modeling leadership behavior, and other aspects of leadership phenomena are demonstrated when some of the other children join in to support a suggestion. Some of the children may try to convince one another of the virtues of either the teacher's way of proceeding or one of the other alternatives, thus further modeling processes of influence, as well as having their influence skills reinforced. The children's objection to the teacher's methods constitutes a conflict situation and the teacher by her response will be demonstrating some

approach to conflict resolution, even if it be the raw exercise of the power of her position. And so on and so on.

The range of political learning that actually results will be somewhat different for each child. Each child will have some existing schema for the exercise of authority distilled from his or her experiences with parents, other teachers, camp counselors, etc. For some, the teacher's behavior will be easily assimilated, for others it will represent a discrepancy of lesser or greater extent and they will have to accommodate to the new information. The same will be true with respect to the behavior of the children who raise objections, which will be relevant to schemas of leadership, of influence, of legitimcay, among probably others. Some of the modeling will have immediate effects, as children who might not otherwise have spoken up imitate their friends and make their own suggestions. Their learning from observation in this manner will be further affected by the reactions of the teacher and of their classmates to their imitative behavior. Depending on the child's preferences with respect to the issue, the teacher's behavior and final choice will evoke positive or negative affect which will become attached through conditioning to the individuals involved and also to the individual's mental representation of the observed events (such as another child's leadership behavior), and probably to the newly refined or consolidated schema relative to authority.

Clearly this example and the implications derived from it are speculative and at best hypothetical. To the extent that the illustration is convincing, it suggests the complex manner in which the four different

learning processes are related and the variety of political content simultaneously available for learning in an actual situation.

Now let us imagine an adult situation. Suppose a new regime has come to power and new agency heads have been appointed. In this particular agency, the new Secretary has called a meeting of the key staff members who served with his predecessor. After introductions, the first item on his agenda is the question of whether the agency should issue a position paper spelling out the changes and new directions it will follow. It is clear that this is the new Secretary's preferred approach. Discussion is slow in starting. Some of the newer members on the staff express some positive reactions, guardedly out loud and rather enthusiastically to each other. The most senior member speaks out and voices strong objection to the Secretary's idea, stating that this will antagonize other agencies on whose cooperation and good will they depend. He gives examples and speaks forcefully and with conviction. Some of the other older members concur and a vigorous discussion ensues. The new Secretary listens to all sides, but is clearly more responsive to those who support his idea. Someone suggests that he should meet informally with other agency heads to prepare the ground for the issue of a position paper. Someone else suggests that they should take a vote. Still another suggests that a committee should be appointed to study the matter and make a recommendation. The Secretary brings the discussion to an end by saying that he will have to consider the matter and will let them know what he decides.

Is such a situation an occasion for political learning? By his differential responsiveness to the various suggestions, the new agency head is selectively reinforcing certain types of behavior and conveying information about the nature of the reinforcement contingencies that exist in relating to him. He is modeling a particular form of acceptance and non-acceptance of ideas and initiative. By his way of introducing his own proposal, he is modeling a style of leadership. The older and newer members are modeling two contrasting modes of responding to his leadership. The reactions of the Secretary and of the staff members to each other's statements produce positive and negative affects in various individuals, toward the Secretary, toward the group, toward the agency, and toward particular others. There is explicit conflict between some of the older members and some of the newer ones, and implicit conflict between the Secretary and those who oppose his proposal. Thus there is modeling of approaches to conflict resolution and considerable transmission of information about how the Secretary, the group as a whole, and particular members respond to conflict. The Secretary's behavior conveys information about his definition of his own role and authority and of the corresponding roles of the other staff members. And, again, so on and so on.

As in the case of the classroom example, the particular political learning that actually results from such a situation is different for each individual as a result of what he brings to the situation and of his particualr role within it. The Secretary is developing positive and negative affects toward different individuals in the group as a result of their behavior toward him and his idea. By observing

the interaction among the staff, he is learning about the more and less effective ways of influencing the various individuals involved. From that interaction, he is also obtaining information about the informal status system that prevails within the staff. Those staff members in positions of greater responsibility are observing the Secretary's mode of leadership and their behavior in comparable situations may subsequently reflect this. Some of the junior members may learn ways of responding to the Secretary from observing the behavior of senior members of higher status. Each individual is acquiring a unique configuration of information about the ideas, preference, and loyalties of all the others. Each member is also acquiring a particular concept of the authority now prevailing in the agency, by assimilating the Secretary's behavior to his or her prior concepts of authority in general and the Secretary's authority in particular, and by in turn accommodating these existing schemas to the unique or novel (for the individual) aspects of the Secretary's behavior.

Neither this adult example not the earlier one about children in a classroom can demonstrate either that the four processes of learning do occur simultaneously and with reciprocal effects or that diverse political learnings are possible in relatively simple situations. Such a demonstration requires research specifically designed to test these notions. However, if our accounts of what is known about conditioning, reinforcement, modeling, and assimilation and accommodation are valid, then hypotheses that predict patterns of learning similar to those depicted in the two examples seem to follow quite directly.

INDIVIDUAL POLITICAL DEVELOPMENT AND THE PROCESS OF PROGRESSIVE DIFFERENTIATION

We have suggested at various points that, although political learning is life-long, its content is determined to an important extent by the developmental status of the learner. In both the child and adult examples, each aspect that we identified as related to one or another political dimension can also be related to a variety of other dimensions—leadership behavior also entails efficacy and influence, and the exercise of authority involves leadership and conflict management. Thus multiple learnings can result from a single experience at any age. These learnings, however, will be different in the child and in the adult cases.

Both the child's perception and understanding of events and the repertory of behaviors he has available to deal with them are cruder and less differentiated, producing more generalized learning. Children of elementary-school age are still in the process of acquiring feelings, judgments, and predispositions with respect to very encompassing social phenomena that are reflected in the situation illustrated. Thus, although one child may, for example, be engaged in learning with respect to leadership, this learning will serve as the basis, not only for further learning about leadership, but also for further learning relative to a variety of other phenomena and dimensions—about his social skills, about family structure, about power, about role and status, and about authority, for example.

An adult, in contrast, brings to most situations a rather well-developed set of schemas which he tends to impose on the situation or test against it. These schemas encompass both his understanding of the

nature of the situation and its context and his view of the behaviors on his part that are necessary, appropriate, or useful in the situation. In addition, he brings an equally elaborate repertory of behaviors, or values, that color his perceptions and responses. All of these are the highly complex products of the history of interaction between his capacities and the environmental events he has encountered from the beginning of infancy. In each new situation, these cognitive schemas, behavior tendencies, and affective preferences or values continue to be modified, but the modifications tend to be specific and limited. Thus the participants in the adult example above engage in learning, not about leadership in general but about the leadership of the new Secretary; not about conflict and conflict resolution in general, but about the conflicts that seem likely with the new regime and about the differential effectiveness and acceptability of different modes of conflict resolution in the new circumstances. These contrasts are drawn in extreme terms to make a point. In actuality, of course, the political concepts and skills of adults continue to be refined at a general level as well as in specific detail. The overall differences, however, still obtain.

There are analogues to this in other areas of development. An external stimulus will evoke a total response from an infant, involving his whole body. Gradually he will learn to use the relevant part of his body only, reaching for something with his arm, and even more gradually these movements will become precise and skillful so they will address themselves to and accomplish one specific task. A similar

point can be made with respect to emotional reactions. The infant responds to stimuli either with joy or rage regardless of the extent or intensity of the stimulus. The distinctions among enjoyment, pleasure, fun, and happiness, or anger, irritation, and hostility evolve only later as experience accumulates and undifferentiated responses are not sufficiently adaptive or satisfying. What is reflected in the differences in specificity between earlier and later learnings is that learning and behavior become progressively more differentiated in the course of development.

Such a process of progressive differentiation is the central element of our conception of the relationship between childhood political learning and its adult products. It means, for example, that the earliest sources of an adult's orientations toward minority rights might be found in his experiences of participation in decision-making in the family and peer group. Or that adult attitudes toward political participation may be rooted, in part, in early experiences of success and failure in getting needs recognized by significant adults. This is not to say that such early experiences fully determine and account for any adult attitudes or behavior, only that among the sources of adult attitudes and behaviors, the earliest ones might be such experiences. An important corollary of this point of view has to do with the effects of learning experiences at different points in development. Experiences that occur when the organism is relatively undifferentiated along a certain dimension have more widespread effects than the same experiences would have later on. A child who at age four receives consistent

reinforcement for, say, jumping off a high step may thereby come to value and enjoy all large-muscle activity. The achievement of the same consequence with a ten-year-old, however, would require many different reinforcements of a variety of specific physical activities, because "large-muscle activity" is by then differentiated into jumping, climbing, doing cartwheels, swimming, running, etc. Similarly, the learning about individual or minority rights that the child distills out of his peer-group experiences is likely, at the outset, to transfer indiscriminately to all situations in which rights of any kind are perceived to be involved, regardless of distinctions that an adult might see as making such transfer inappropriate. Refinements and differentiations follow later, as subsequent experiences build on the global products of earlier ones and as successful adaptation demands distinctions.

To say that the effects of early experiences are more widespread than those of later ones also means that early learning is in some ways more important, more consequential, than later learning. This is an argument that has been made before from several points of view. For example, because early learning is more likely to be unverbalized or unclearly verbalized, it has been argued that it is therefore more resistant to change and more influential because its effects are not easily recognizable to the individual. Or, because by definition early learning occurs when there is less other learning already acquired by the individual, it is seen as thereby being in a more basic, fundamental position relative to subsequent learning, being already there to influence and channel what comes later. Both of these rationales are consistent with, and can be subsumed under, the point of view that development is a

process of progressive differentiation and that therefore early acquisitions have more widespread ramifications. Whatever analogy one uses, the early period is a formative one and experience at that time is affecting the basic structure (the trunk of the tree so to speak) from which all later specifications and elaborations (the branches) will grow.

The notion of branching is an important part of our concept of progressive differentiation and constitutes the major distinction between the concept and other views of the relationship between learning at one point in time and attitudes or behavior at a later point. The outcome of a particular learning incident can be one of many possible outcomes, depending on the particular potency of each of the internal and external factors at that moment and on the particular way they interact. As we suggested in our examples, different individuals will come away from the situation with different learnings. Even more importantly, however, each individual will then move into a different situation, so that the learning he brings with him will interact with a unique set of circumstances in each case to lead the continuing process of learning in a unique direction. Learning that authority can be arbitrary, for example, can lead in one case to tendencies to rebel, in another to submissiveness, and in yet another to the tendencies to be rebellious is some situations and submissive in others, depending on how subsequent situations engage the prior learning. Development is thus cumulative, but not in a simple manner. The implications of a branching notion are expressed by M. Brewster Smith in a discussion of the development of competence in a way that can hardly be improved upon:

> ...a view of causation in personal and social development as inherently circular or spiral, rather than linear in terms of neatly isolable causes and effects. As the very concept of interaction implies, developmental progress or deficit is typically a matter of benign circles or of vicious ones, not of persistent effects of clear-cut single causes. In social life, there is much bitter truth to the biblical maxim, "To him who hath shall be given; from him who hath not shall be taken away even that which he hath." Launched on the right trajectory, the person is likely to accumulate successes that strengthen the effectiveness of his orientation toward the world while at the same time he acquires the knowledge and skills that make his further success more probably. His environmental involvements generally lead to gratification and to increased competence and favorable development. Off to a bad start, on the other hand, he soon encounters failures that make him hesitant to try. What to others are challenges appear to him as threats; he becomes preoccupied with defense of his small claims on life at the expense of energies to invest in constructive coping. And he falls increasingly behind his fellows in acquiring the knowledge and skills that are needed for success on those occasions when he does try (Smith, 1968).

Another implication of the principle of progressive differentiation as applied to political learning is that the continuity of political concepts, attitudes, and behaviors between childhood and adulthood may not be obvious. If an adult political pattern is one specification of a more global pattern in childhood, then there is no reason to expect any more similarity between the two than there is between a toddler's attempts to stack a tower of blocks of different sizes and an adult's capacity to deal with abstract ideas. Consistency in the overt forms, in other words, is not an adequate measure of underlying continuity. This is related to our

earlier discussion of the research that finds little stability in the measured attitudes of children toward objects in the remote political world of government. If continuity is to be uncovered between the political attitudes, feelings, and behaviors of children and adults, the forms of political learning that are examined in the early years must be appropriate to the age level being observed rather than being superficially similar to the adult attitudes or behaviors of which they might be precursors. The concept of progressive differentiation offers an initial guide for identifying those appropriate early forms.

In describing the course of learning viewed over time, the concept of progressive differentiation is applicable to the short as well as the long range, at any age, and to narrow areas of functioning as well as to development as a whole. If we analyze the political learning involved in being socialized to a new role or in getting to know an organization of which one has just become a member, it becomes evident that even such short-term and limited learnings undergo a process of progressive differentiation. Cognitively, for example, one starts out with a general picture of where one's new role fits into an organization and of what skills and abilities it calls for. Gradually, one learns about the other surrounding roles and the distinctions in expectations, privileges, and tasks among them. Eventually, one comes to understand the subtle distinctions that exist at the informal level and how they mesh with the formal structure. Affectively, one starts out with general feelings of awe, distrust, respect, warmth, or whatever for other positions in the organization, based on one's prior experience in similar organizations.

These feelings become sharpened and specific as they become associated with particular individuals and particular relationships. Behaviorally, one starts out by dealing with the general issues that the role involves and then moves on to more specific tasks as these become clear and as the particular skills required become familiar.

In one sense, therefore, the concept of progressive differentiation does no more than describe an aspect of common experience. The progressions illustrated above, for example, with respect to the learning of a new role may seem quite self-evident. In another sense, however, the concept indicates the types of differences that should be anticipated when one examines an ongoing process cross-sectionally. The task of formulating the particular steps in any instance of the process of differentiation, the various branchings that are possible, and the conditions under which an individual will follow one or another route of course still remains.

In the book we have already cited extensively, R. W. Connell (1971) develops a concept that suggests a specific way in which progressive differentiation of cognitive learning about government and institutionalized politics may occur. In analyzing children's understanding of political roles, Connell finds that younger children confuse the "tasks, titles, recruitment rules" and even jurisdictions of various political figures (p. 24). The children seem to have only one encompassing conception of a political role and they impose it on all the roles they hear about. Connell says about these confusions, "To speak of them as the confusion of things originally distinct is to see them from an adult standpoint only. To the child, the problem is not to bring together what is distinct,

but to distinguish what seems to be the same" (p. 24). To such a single conception that many children hold Connell gives the label "task pool." He considers that each child creates it from a pooling of all the disparate pieces of information about government that he receives from many sources. Because children have only a vague image of what government is and of who the individuals are who constitute government, they assimilate all kinds of information about any of the tasks done in the remote world to their single conception of the governmental role.

As Connell points out, this indiscriminate assimilation produces what seems like an overestimation by children of the power of political figures. Since government is seen as doing everything and responsible for everything, and since any political figure is assimilated into this encompassing role, children in effect attribute great powers to whatever particular political figures they talk about. This is what Connell sees as the true meaning of the oft-cited finding in American political socialization research that children see the President and other political figures as "benevolent." He says,"explanations of this have usually been in terms of children's emotional need to see 'authority' as benevolent. If we look back at Greenstein's celebrated article on the subject, we find that many of the statements he quotes are open-ended task descriptions of the kind we have just mentioned, or items from a general governmental task pool (F. I. Greenstein. The benevolent leader). If American children are like Australian ones in this, we may argue that the apparent benevolence of particular figures is in large part an effect of the undifferentiated task pool—that is has a cognitive, not an emotional, basis" (p. 28).

Connell's interpretation is, in effect, that political cognitions become progressively differentiated with maturation and experience, serving at each point as the basis for adaptation to incoming political information. It should be possible to identify other basic concepts, or schemas, such as that of the "task pool," on which political understanding builds and to then trace, for different individuals and different groups of individuals, the particular course that subsequent differentiation takes in response to their specific political experiences. (Connell himself has some interesting suggestions in this regard.) Moreover, a similar analysis needs to be made of affective and behavioral political learning in order to identify the global sources from which the vast complexity of political feelings and skills gradually emerge.

THE TASKS AHEAD

It should be clear that neither our formulation of the four components of political learning nor our conception of progressive differentiation constitutes a theorical model from which hypotheses can be clearly derived. All that this paper has attempted to do is to identify some of the major elements that such a model must take into account and to suggest some of the conceptual links among these. The significant theoretical and empirical tasks lie ahead.

One direction these might take would be to examine the different consequences for learning of systematic variations in the relative contributions of conditioning, reinforcement, modeling, and cognitive conflict (assimilation and accommodation). That is, for example,

how do the learning products differ, in content, stability, and resistance to change, between a situation that is highly charged emotionally and one that is similar in every other respect but is emotionally neutral? Or, how is political learning of a political skill affected by the introduction of a salient model, and how is it affected by variations in the personality, status, social desirability, and other characteristics of the model?

Similarly, the mutual effects among the four processes might be examined when their relative contributions are varied. Bandura and some of his associates have been doing some research relevant to this point. They have compared, for example (Bandura & Jeffery, 1973), the effects of symbolic rehearsal and motor rehearsal on the retention of observationally learned motor responses. They have experimentally manipulated, in other words, the cognitive component associated with modeling and observed the effects on the learned behavior. The opposite question seems equally interesting, namely, what are the cognitive effects of variations in the model or in the particular way in which a behavior is modeled? If cognitions are internal representations of events, then the particular content of the modeling event should have cognitive consequences, but there is no specific evidence on this point.

All the possible variations among the four components give rise to innumerable learning situations that might be fruitfully researched. It is more than likely, furthermore, that the interaction among them will vary in different settings, different content areas, and at different

ages. Whether or not such research would bring us closer to an elegant and encompassing theory of political learning cannot, of course, be known in advance. It seems plausible, however, that the key to the intricacies of real-life learning lies in unraveling the complex interactions among the component processes of learning.

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